

Urara Mizushima*: *Entodon microthecius* Broth. and *E. compressus* C. Müell.—Critical notes on Mosses (5)

水島うらら*: *Entodon microthecius* Broth. と *E. compressus* C. Müell. について—蘚類寸評 (5)

In Handel-Mazzetti's *Symbolae Sinicae*, Brotherus (1929) described *Entodon microthecius* as a new species from Yunnan province. In the diagnosis he compared it with *E. compressus* as follows: "species *E. compresso* C. Müll. affinis, sed seta longiore et theca minuta diversa." According to his description the length of the setae is about 1.5 cm, and the size of the capsules is 2 mm long and 0.6 mm wide. Comparing it with *E. compressus*, I cannot find clear difference in the length of setae and the size of capsules (Mizushima 1960). The capsules more or less 2.5 mm long in *E. compressus*, are a little longer than those in *E. microthecius*. In the type specimen of the latter, Handel-Mazzetti's no. 6306, the length of setae varies from 1 to 1.5 cm, which falls within the range of variation in *E. compressus* (U. Mizushima 1960, p. 129). The capsules vary somewhat in size, but are mostly 2×0.6 mm as Brotherus described, and the average is somewhat smaller than the mean value of those in *E. compressus*. The specimens from northwestern Yunnan and Szechwan, cited by Brotherus as *E. compressus* are so similar to *E. microthecius* that I cannot find definite differences between them. Careful examination of many specimens of *E. compressus* revealed that most of the morphological characters in the gametophyte and the capsules vary considerably with habitat conditions. Thus I concluded that *E. microthecius* is better regarded as a synonym of *E. compressus*. Specimens of *E. compressus* from continental east Asia were all slenderer and smaller in size than those from Japan, but no conclusion could be reached because of the scanty material from the former.

Besides, the nomenclature of *Entodon compressus* is quite complicated. In the "Japanese Entodontaceae" (1960) I chose the name *E. compressus* C. Müell. (1844) for this species. In 1965, H. A. Crum, W. C. Steere and L. E. Anderson adopted more recent *E. Challengeri* (Par.) Card. (1904) as the correct name, because the name *E. compressus* Müell. is based on *Leskea compressa* Hedw. (1801) which is

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the same as *E. cladorrhizans* (Hedw.) C. Müell. and as a result, the epithet *compressus* cannot be used for the moss in question. I do not agree with their interpretation because of the following reasons. Müller's *Entodon compressus* was published in *Linnaea* **18**: 707 (1845).

8. *Ent. compressus* C. Müll. Caulis breviusculus brevipinnato-ramosus, strictiusculus; folia caulina lato-ovata obtusa, acumine brevissimo rectiusculo s. subrevoluto, concava, flavescenti-nitida integerrima; perichaetialia longi-acuminata integerrima diaphana; seta brevis; capsula parva ovalis, operculata cylindracea pallide purpurascens; peristomium breviusculum; dentes acutangulo-trabeculati, ciliis filiformibus rugulosis subpertusis; annulus parvus.

Isothecium compressum Hmp. in litt. *Anomodon compressus* Bruch. in litt. ad Hampe. *Leskea compressa* Hedw. sp. muscor. (op. posth.) tab. 56 (?). Brid. br. univ. II. p. 287.

Hab. America septentr. Ohio.

Among the synonyms *Isothecium compressum* and *Anomodon compressus* are omitted from the object of discussion, because they are merely 'in litt.' *Leskea compressa* Hedw. was, however, effectively published with description in his *Species Muscorum* p. 232 and illustrated in tab. 56. Then a question arises as to why C. Müller cited Hedwig's original source only citing tab. 56 with a question mark. If he actually had consulted *Species Muscorum*, the page 232 where the original description of *Leskea compressa* appeared should have been also cited. I suspect that he merely considered *L. compressa* Hedw. as a doubtful synonym of his species which was described based on the Engelmann's specimen from Ohio. This supposition is substantiated by C. Müller's citation of the locality and the description of *E. compressus*. He cited Ohio only, and did not cite "Pennsylvania," the type locality of *L. compressa*. If *E. compressus* were based on *Leskea compressa*, Pennsylvania should also be added. Moreover, C. Müller described *E. compressus* as "... folia caulina lato-ovata obtusa ... concava, ..." while Hedwig's description of *L. compressa* is "... folia ... lanceolata, planiuscula. ..." These differences are clearly shown by Cardot's illustration (1899). Plate 7, fig. 7 is of 3 leaves drawn from Engelmann's collection from Ohio described by C. Müller as *Entodon compressus*. Fig. 5 consists of 2 leaves drawn from Muhlenberg's original collection of *Leskea compressa* Hedw. from Pennsylvania. Fig. 6 shows a leaf of *Neckera cladorrhizans* Hedw. which is *Ent. cladorrhizans* (Hedw.) C. Müell. One may not be able to distinguish figs. 5 and 6, but easily be discriminable from fig. 7. I

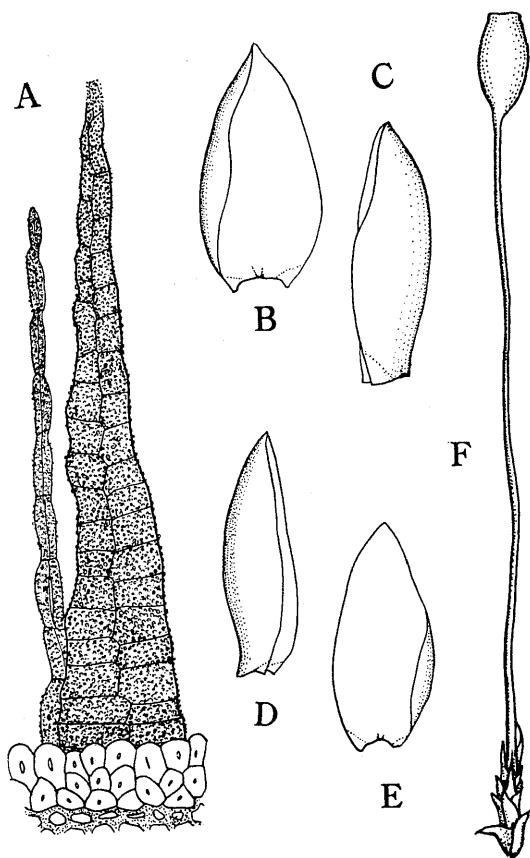


Fig. 1. *Entodon compressus* C. Muell. A. Peristome, $\times 225$. B-C. Stem leaves, $\times 33$. D-E. Branch leaves, $\times 33$. F. Sporogon, $\times 6$. Drawn from holotype of *E. microthecius* Broth.

States. After an exchange of opinions with Dr. Crum, we both came to the conclusion that the name *Entodon compressus* C. Müeller is the correct name for the moss.

Entodon compressus C. Müell. in *Linnaea* **18**: 707 (1845); U. Mizushima in *Journ. Hattori Bot. Lab.* **22**: 127 (1960), with extensive synonymy.

E. Challengeri (Paris) Cardot in *Beih. Bot. Centralbl.* **17**: 32 (1904); Crum, Steere & Anderson in *Bryol.* **68**: 396, 421 (1965).

E. microthecius Broth. in *Handel-Mazzetti, Symb. Sinic.* **4**: 112 (1929), syn. nov. Neotype. Fig. 7 in pl. 7 (Cardot in *Bull. Herb. Boiss.* **7** (4): 346 (1899).

think this is important. Thus I can not interpret C. Müller's binomial as a combination based on Hedwig's name, but conclusively it was published as a new species. It is similar to the case of *Calystegia japonica* Choisy and *Convolvulus japonicus* Thunb. (cf. Hara 1936).

Then the holotype of *Entodon compressus* C. Müell. is Engelmann's collection from Ohio. According to Dr. H. Reimers, the specimen is not extant in the Berlin-Dahlem Herbarium so I designate Cardot's plate 7, fig. 7 as the neotype unless an isotype is found later. *Entodon compressus* is easily distinguished from the related species by the characteristic shape of leaves especially in the United

Important specimens examined. CHINA: prov. Yunnan, Handel-Mazzetti 8796, WU and S; Handel-Mazzetti 6309, holotype of *E. microthecius* Broth., WU, isotype in S; prov. Szechwan, Handel-Mazzetti 812, WU and S.

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Entodon microthecius は Brotherus が *E. compressus* と比較して蒴柄が長く蒴胞が小さいという点で分けたものである。基準標本を調べると、蒴柄の長さは *E. compressus* の場合の変化範囲に含まれてしまう。蒴胞の大きさはやや小さいが、*E. compressus* の中にも時々小形のものがあって、これだけで *E. microthecius* を独立種と考えるのは無理である。しかし今まで筆者が調べたアジア大陸産の *E. compressus* は、栄養体も蒴も小形のものが多く、あるいは地理的変異かも知れないが、資料が少ない現在ではむしろ区別しない方が良いであろう。学名について最近 Crum, Steere, Anderson 博士等は *E. compressus* の代りに *E. challengerii* (Par.) Card. を用いておられる。*E. compressus* は Müller が *Leskea compressa* Hedw. を basionym として 1844 年に *Entodon* 属に組かえた名で、*L. compressa*=*Entodon cladorrhizans* であるから

E. compressus は用いられないという理由からである。しかし Müller の原典を見ると *L. compressa* は basionym とは考えられず、*E. compressus* は 1844 年に Müller が記載した新名と見るべきで、従ってこれが適法且つ有効な名である。

〇ヒレアザミについて (水島正美) Masami Mizushima: On *Carduus crispus* L. in Japan

ヒレアザミ (一名ヤハズアザミ) は低山の草地や山畑のへりなど、明るい乾燥気味の環境の所に時折見かける。どうも日かげや湿り気味の場所には見られないようである。日本では本州、四国、九州に分布しており、その学名は従来 *Carduus crispus* L. として過されて来た。草丈は 0.5—1 m と個体により、また生育場所により変異が大きい。葉は莖の下一中部で羽状中裂一歯牙縁、丈の高い個体ほど深く切れ込むことが多く、裏面にくも糸状の毛を布く場合もあり、この時には莖中一上部の葉に量が多くなる。この毛は総包には無に等しい位しかでず、全然ないことの方が普通である。莖上半部の葉では基部に比較的広い裂片が 1 対あり、半抱莖の態をなすのが普通であるが、丈の低い個体では次第に狭まって莖に沿下することもある。そう果は完熟すれば長さ 4 mm、未熟でも 3.5 mm 以上あることが多い。これ等の形質、殊に果実の寸法は subsp. *agrestis* の特徴である。少数しか見ていないが、朝鮮半島、北支、シベリア東部産のものも邦産品に一致する。従来の植物誌や図鑑類にはそう果を長さ 3 mm としてあるが、これは subsp. *crispus* の一特徴である。もし此の型のものが日本に産するとしても極く稀であろう。すなわち筆者自身の検した 1878 年 (明治 11 年) 以降の邦産ヒレアザミは *C. crispus* そのものではなく、その subsp. *agrestis* (Kerner) Vollmann, Fl. Bayern 757 (1914)—Rothmaler, Exkurs.-fl. Deutschl. Krit. Erg.-bd. 333 (1963)—*C. Personata* (L.) Jacq. var. *agrestis* (Kern.) Hegi, Ill. Fl. M.-Eur. Durchges. Nachdr. 6 (2): 857 (1954) の方である。白花形を f. *albus* (Mak.) Hara シロバナヒレアザミと称するが、この名はそのまま亜種の下に用いれば良い。

Subsp. *crispus* は葉が半抱莖せずに狭まり、裏面にくも毛を白く布き、総包も多少この毛につづられ、そう果が長さ約 3 mm のものである。これはやや湿った草地、垣根沿い、やぶや河畔林などに生え、subsp. *agrestis* よりも日かげと水気を好むようである。*C. crispus* は Euro-Siberian 分布型に属する冷温帯種と考えて良く、シベリアから東亜にかけての分布相を通観すると興味ある事実に行き当たる。中央アジアではカザクスタン南部、タジキスタン、ウズベキスタンになく、タルバガタイからサヤン地区にあり、蒙古に散生する。シベリア南半部では西部から極東地区まで産し、東亜温帯域に広く分布するに至る。シナ大陸では揚子江以北の地域に主産するらしい。日本を含め、東